

4th of July Fire Restoration Project

USDA FOREST SERVICE

Lake Wenatchee

& Leavenworth

Ranger Districts



4th of July Fire Restoration Overview

- ◆ **Icicle Complex Fire History, Fire Effects, and Dry Site Strategy**
- ◆ **Icicle Fire Suppression Rehabilitation and Burned Area Emergency Rehabilitation (BAER)**
- ◆ **National Fire Plan and Icicle Complex Projects**
- ◆ **4th of July Fire Restoration Project Proposal**
 - **Landscape Scale Perspective**
 - **Vegetation Treatments**
 - **No Treatment Areas**
- ◆ **NEPA Process**

A photograph of a large wildfire with thick smoke rising from a forested mountain slope. The smoke is dense and billowing, partially obscuring the sky. The fire is visible as a bright orange and red line along the base of the mountain. The foreground shows a dense forest of evergreen trees, some of which appear to be charred or dead.

Icicle Complex

**Fire History
Fire Effects
and
Dry Site Strategy**



**Sunday, August 12, 2001 -
Thunderstorms provided 75 lightning strikes which
started approximately 22 fires.**

Icicle Complex Fire History

Tuesday, August 13 - 450 acres

Thursday, August 16 - 3000 acres

- Victoria fire runs from 1 to 750 acres in the afternoon
- Community of Leavenworth goes on Evacuation Notice

Friday, August 17 - 5000 acres

- The 4th of July and Victoria fires meet at the Icicle Road

Sunday, August 19 - 6800 acres

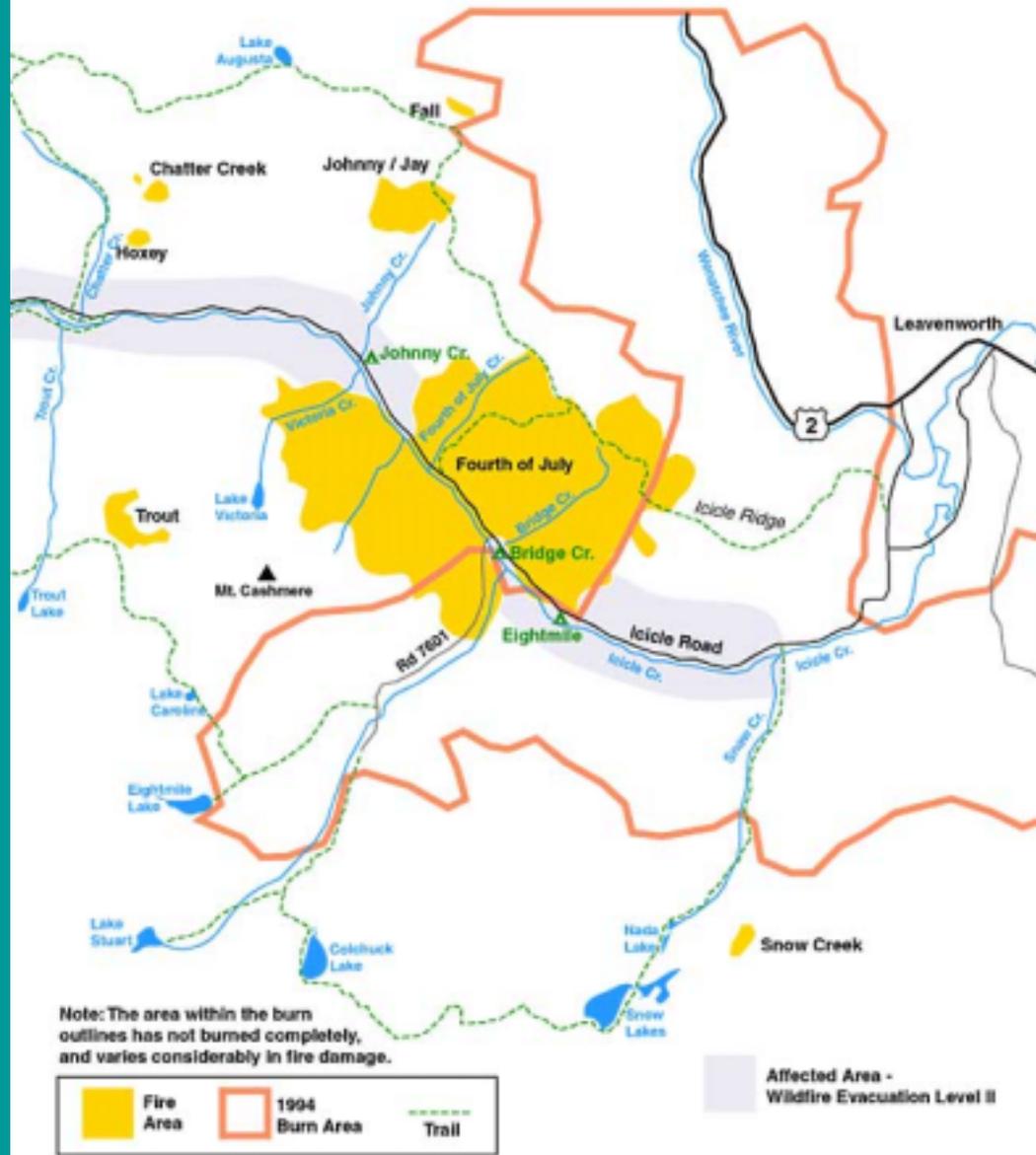
Tuesday, August 21 - 7275 acres

- Receive 0.2" rain; 30% containment

Thursday, August 23 - 85% Containment

Icicle Fire Complex Map

Lake Wenatchee and Leavenworth Ranger Districts
August 28, 2001





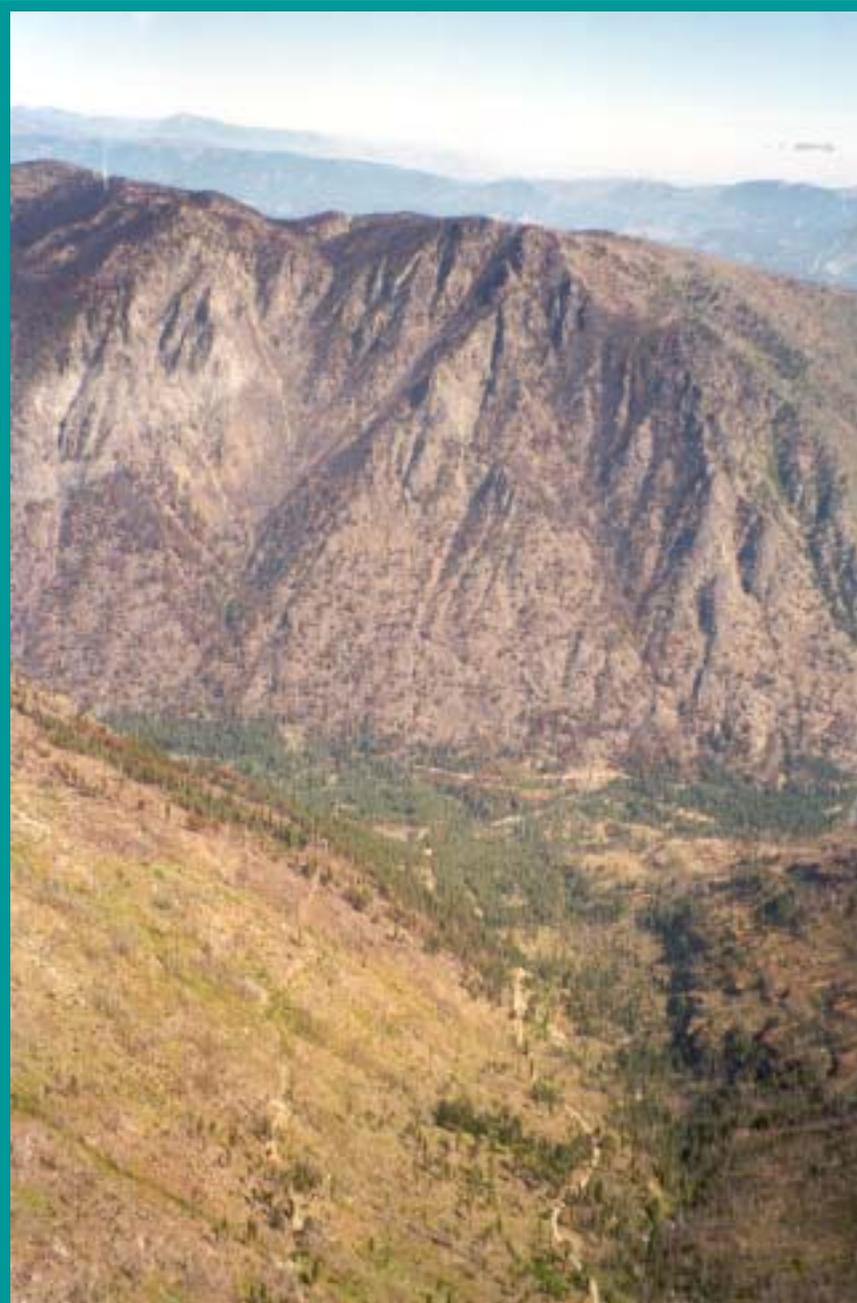
**Unburned Forested Portion of Icicle Valley
- Upstream From 2001 Icicle Complex Fires**



**Icicle Valley Downstream Beyond Burns of 2001
Showing Effects of Rat Creek Fire - 1994**



**4th of July Project Area Upper Half -
Special places, like this remaining green belt
in the Icicle, are important to retain and
protect from uncharacteristic disturbance.**



4th of July Fire From 8 Mile Road - August 2001



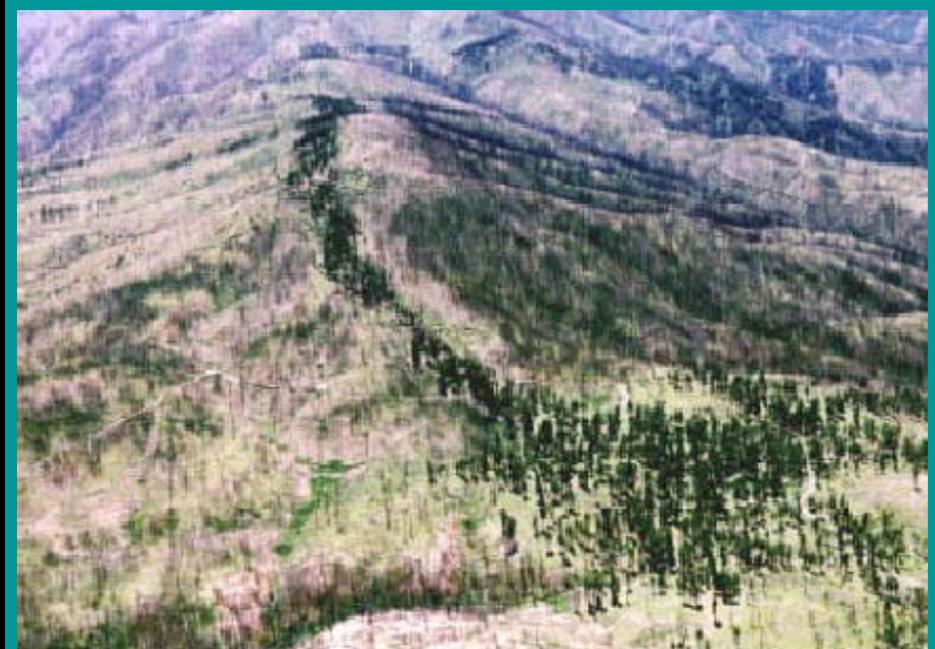
Victoria Fire August - 2001



**Example of low intensity surface
fire and desirable fuel reduction**

Dry Site Strategy

Mud Creek Summit of pre-commercial thinning within the 1994 Tye Fire, as it appeared in the fall of 1994. This stand survived the fire with much less damage than surrounding unthinned forests.



Pre-commercially thinned stand at Mud Creek Summit as it appeared in 1999.

Most of the thinned trees have recovered from the effects of the 1994 wildfire.

Dry Site Strategy



Ponderosa pines are uniquely adapted to thrive in an ecosystem with frequent low-intensity fires. They have few limbs at ground level so it is difficult for surface fires to climb into the tree tops. Pines have thick bark which provides insulation from the heat of flames.

Frequent, low intensity ground fires benefited the forest by thinning out some of the young ponderosa pine and most of the Douglas-fir and grand fir seedlings. This made for less competition for nutrients and water.



Dry Site Strategy



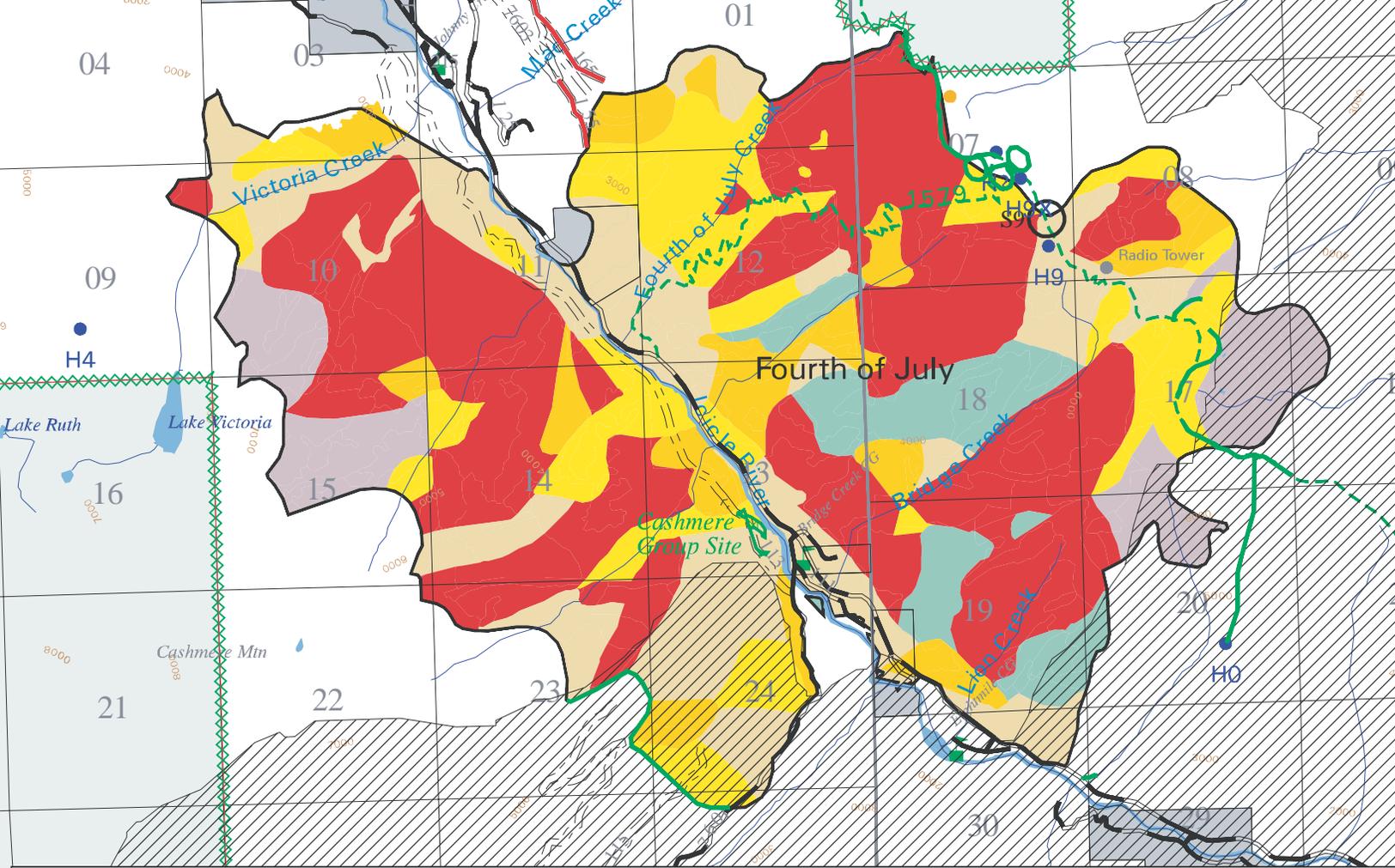
In dense, dry forests fires are now able to climb into the tree tops and move from tree to tree. This has caused a fire environment prone to large scale and high intensity fires difficult to prevent and control. This was the case in 1994 when wildfires in Chelan County exploded across 186,000 acres.

Pruning lower tree branches removes fuel ladders, which will help control wildfire.





**Icicle Complex Fire
Suppression Rehabilitation
and Burned Area Emergency
Rehabilitation
- BAER**



Vegetation Mortality

Fourth of July Fire August 31, 2001

-  National Forest Land
-  Alpine Lakes Wilderness
-  US Fish & Wildlife Land
-  Private Land
-  Hatchery/Rat Cr Fire 94

-  Class 0 - Unburned
-  class 1 - 0 - 20% mortality
-  class 2 - 21-40% mortality
-  class 3 - 41 - 80% mortality
-  class 4 - 80-100% mortality
-  class 5 - Unknown



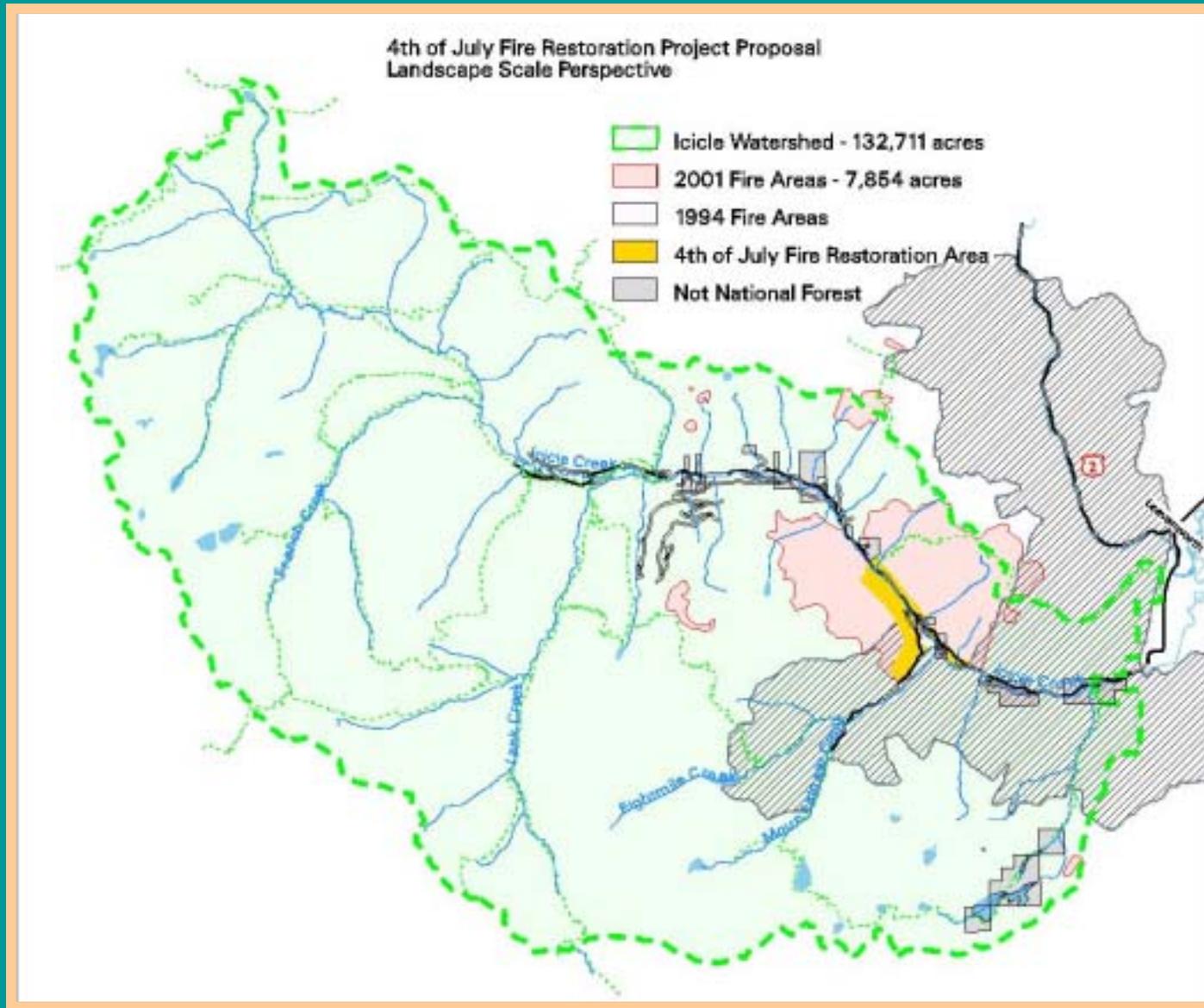
**National
Fire Plan
and
Icicle Complex
Projects**

Key Points of National Fire Plan

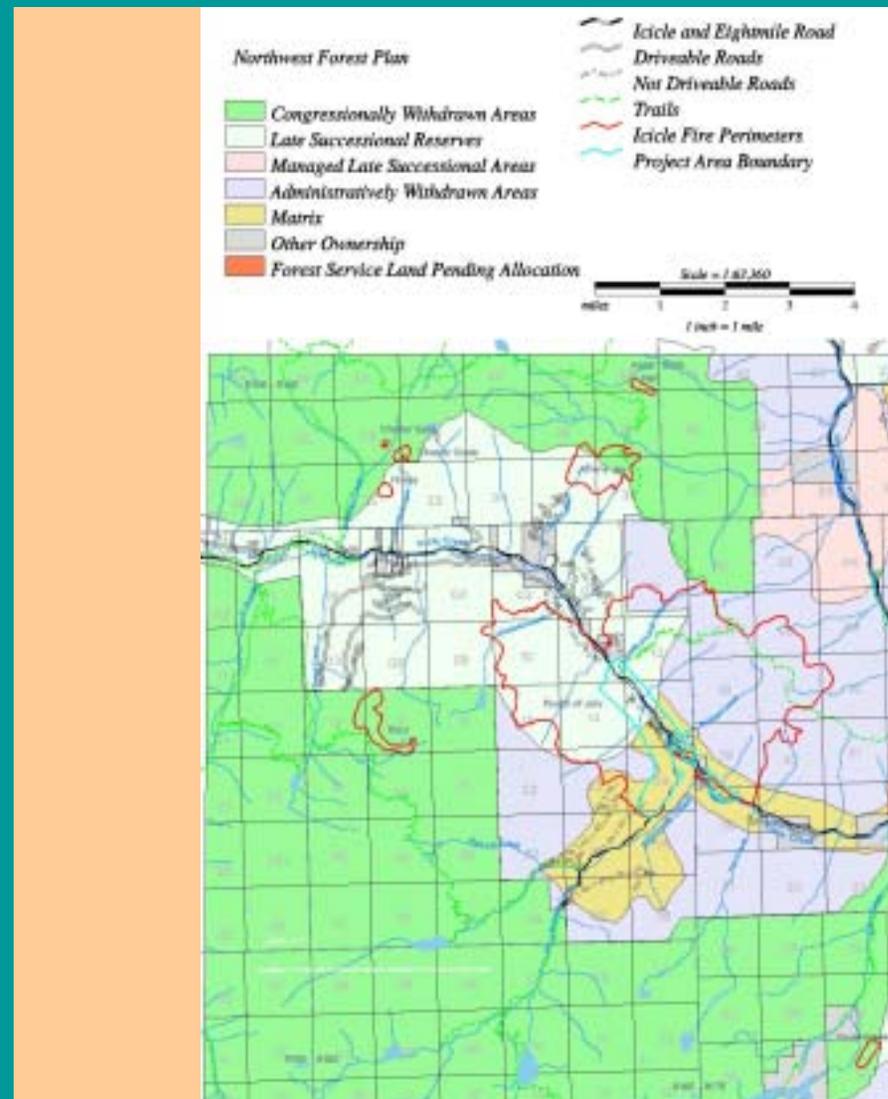
- ◆ **Maintain a cost effective level of preparedness in firefighting and prevention.**
- ◆ **Rehabilitate fire damaged wildlands and restore high-risk ecosystems.**
- ◆ **Invest in projects to reduce fire risk with focused effort in wildland urban interface areas.**
- ◆ **Work with communities to reduce the risks of catastrophic fire.**
- ◆ **Establish and maintain a high level of accountability including oversight reviews, progress tracking and performance monitoring.**

Project Proposal

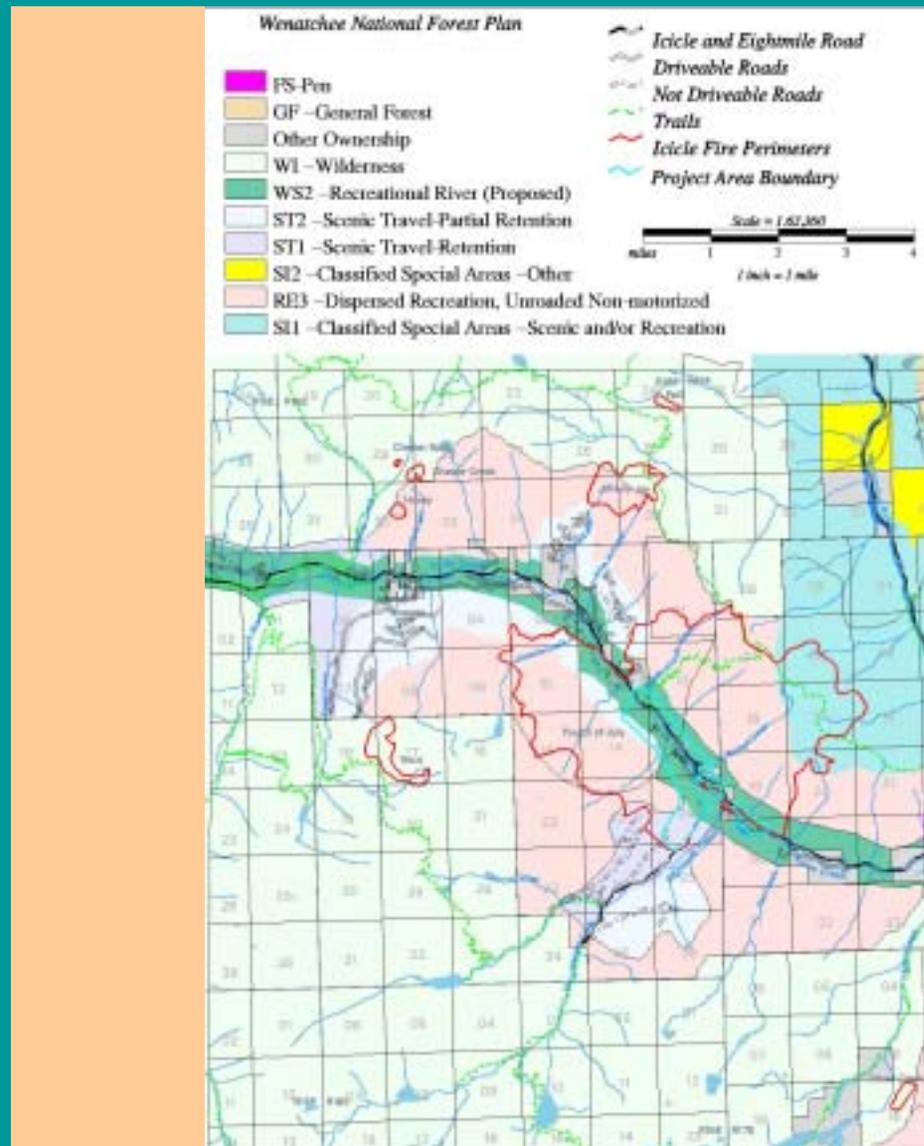
– Landscape Scale Perspective



Northwest Forest Plan and Fire Perimeter



Wenatchee National Forest Plan and Fire Perimeter



A photograph of a forest fire with thick smoke and bright orange flames, overlaid with the text "Purpose and Need". The image shows a large fire burning in a forest, with thick smoke rising into the sky. The text is centered in the middle of the image.

Purpose and Need



**4th of July Fire
Restoration
Proposed Action
– Vegetation Treatments**

Vegetation Treatments – 315 Acres

- ◆ **Primarily Commercial Thinning/Visual Emphasis – 140 Acres**
- ◆ **Primarily Non-Commercial Thinning/Fuels Reduction – 65 Acres**
- ◆ **Planting Only – 75 Acres**
- ◆ **Fuel Break/Urban Interface Within Roadless Boundary – 5 Acres**
- ◆ **LSR Fuels Reduction and Planting – 20 Acres**
- ◆ **Combination: Non-Commercial Thin, Commercial Thin, Fuels Reduction, Planting – 10 Acres**

4th of July Fire Restoration Proposed Action

- Treatment Areas**
- Primarily Commercial Thinning/Visual Emphasis
 - Primarily Non-Commercial Thinning/Fuels Reduction
 - Planting Only
 - Fuel Break/Urban Interface within Roadless Boundary
 - LSR Fuels Reduction & Planting
 - Combination: Non Commercial Thin, Commercial Thin, Fuels Reduction, Planting
- No-Treatment Areas**
- Inventoried Roadless Area
 - No Treatment within Project Area - Letters indicate reason.
 RWS - Riparian/Wildlife Connectivity/Soil Stability
 BU - Burned: Unique Habitat
 BR - Burned: Rock Dominated Non-Forest
 BMG - Burned: Moist Grand Fir Forest
 BFR - Burned: Fuels Reduction/Thinning Not Needed
 CG - Campgrounds
 - Private Land

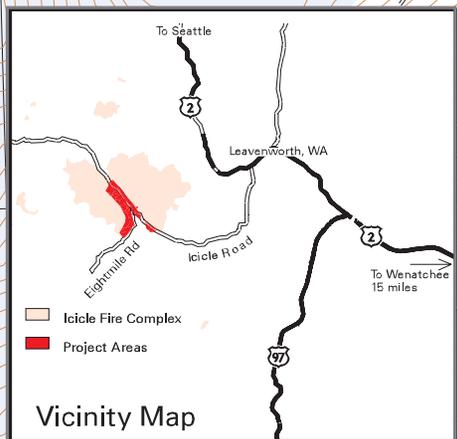
Lake Wenatchee and Leavenworth Ranger Districts
Okanogan and Wenatchee National Forests

T24N, R16E, Sections 11, 12, 13, 14, 24, 25
T24N, R17E, Sections 19, 30

Contour Interval 100 feet
2.75 inches = 1 mile



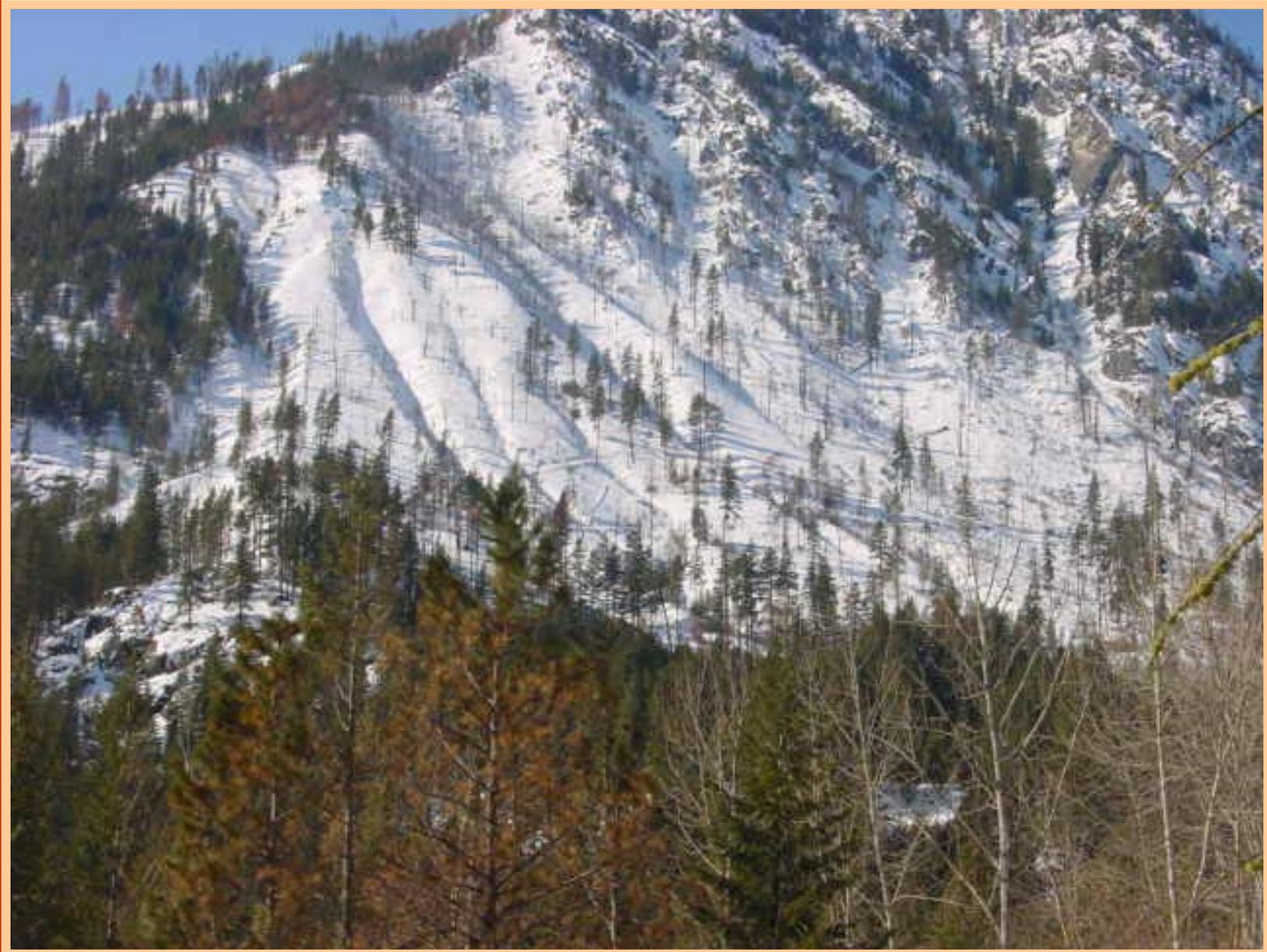
- Icicle and Eightmile Road
- Driveable Roads
- Not Driveable Roads
- Trails
- Fourth of July Fire Perimeter
- Helicopter Landings
- Gates - Seasonal Closures



Vegetation Treatments

- 1. Planting**
- 2. Thinning & Pruning**
- 3. Fuels Reduction**

1. Planting



2. Thinning & Pruning



Thinning & Pruning

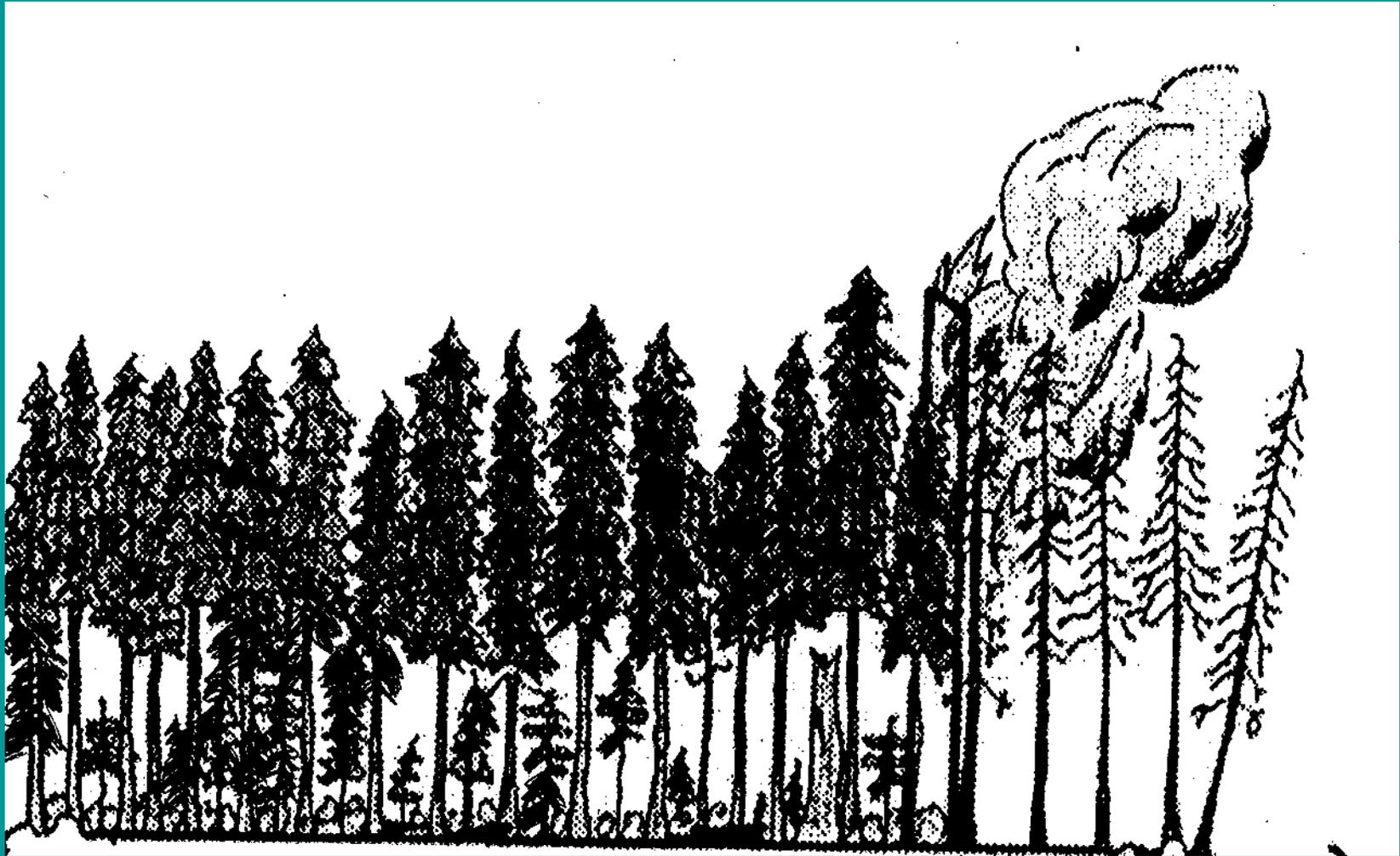
Reduce Fuels

- ◆ **Crown**
- ◆ **Ladder**
- ◆ **Ground**

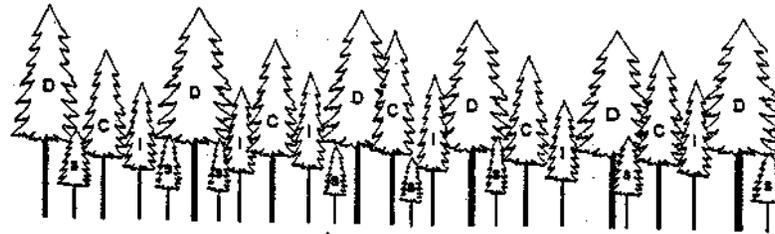
Grow & Maintain Large Trees

- ◆ **Especially Ponderosa Pine**

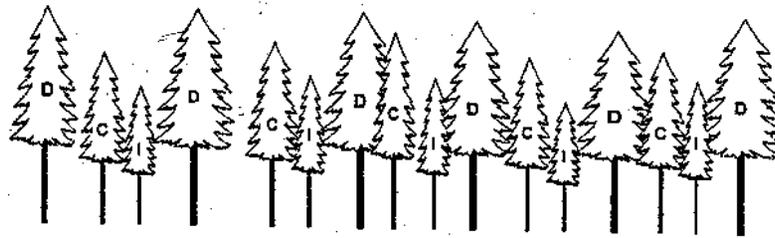
Crown, Ladder, & Ground Fuels



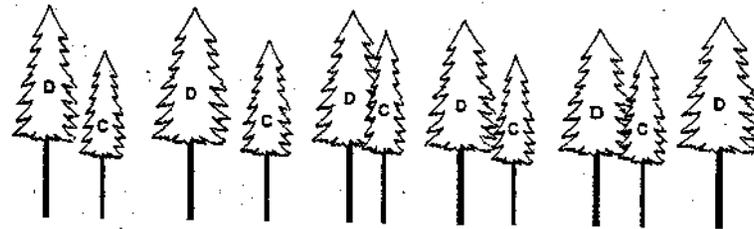
Thinning From Below



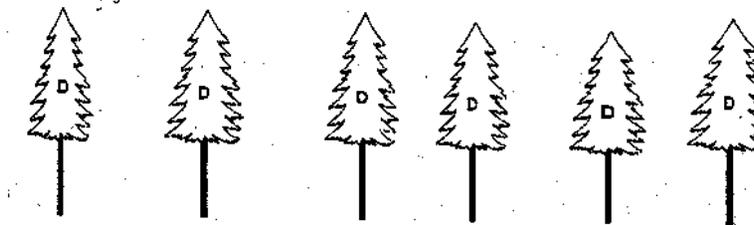
Unthinned stand



Light thinning



Moderate thinning

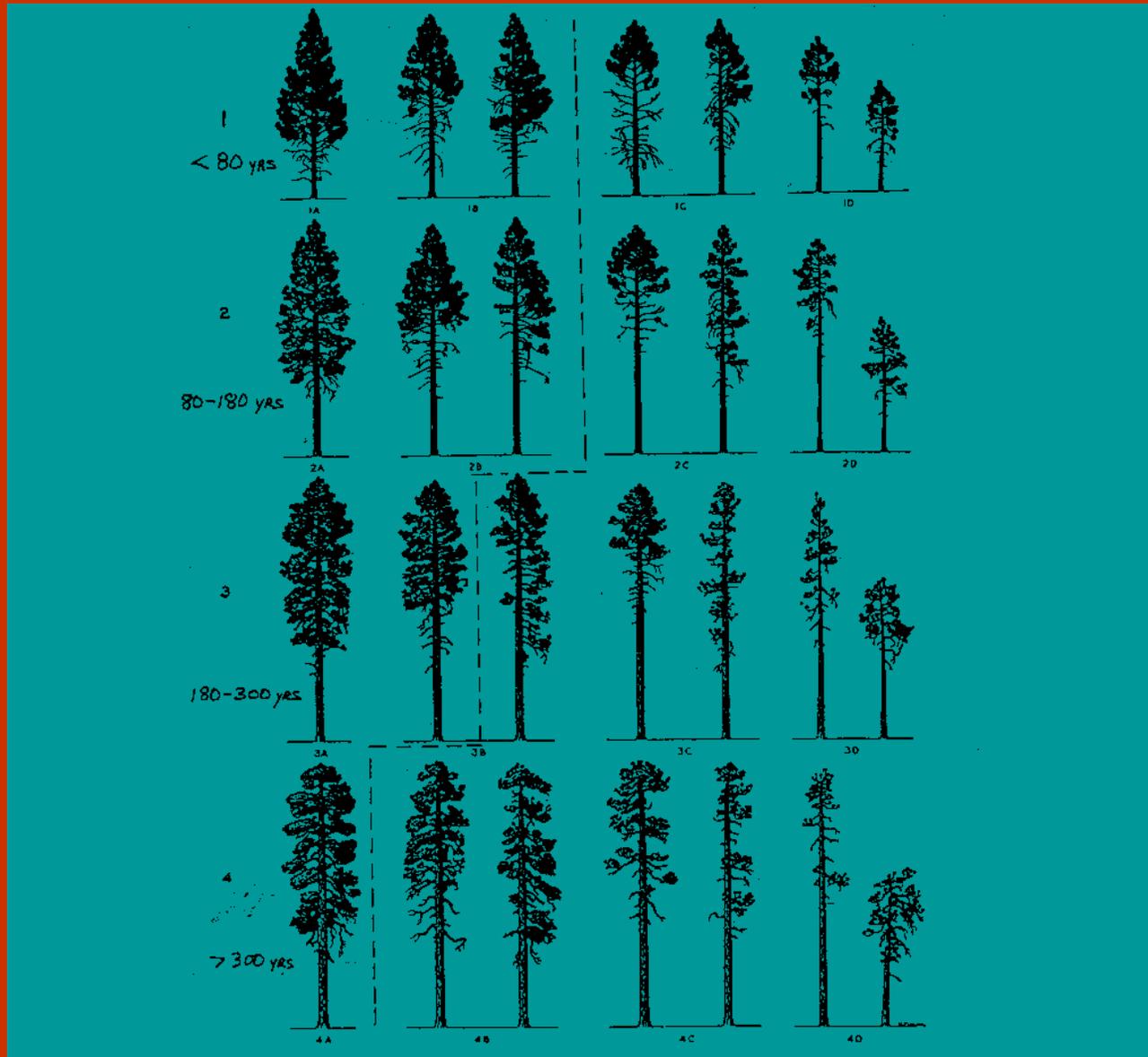


Heavy thinning

Open-Grown Pine

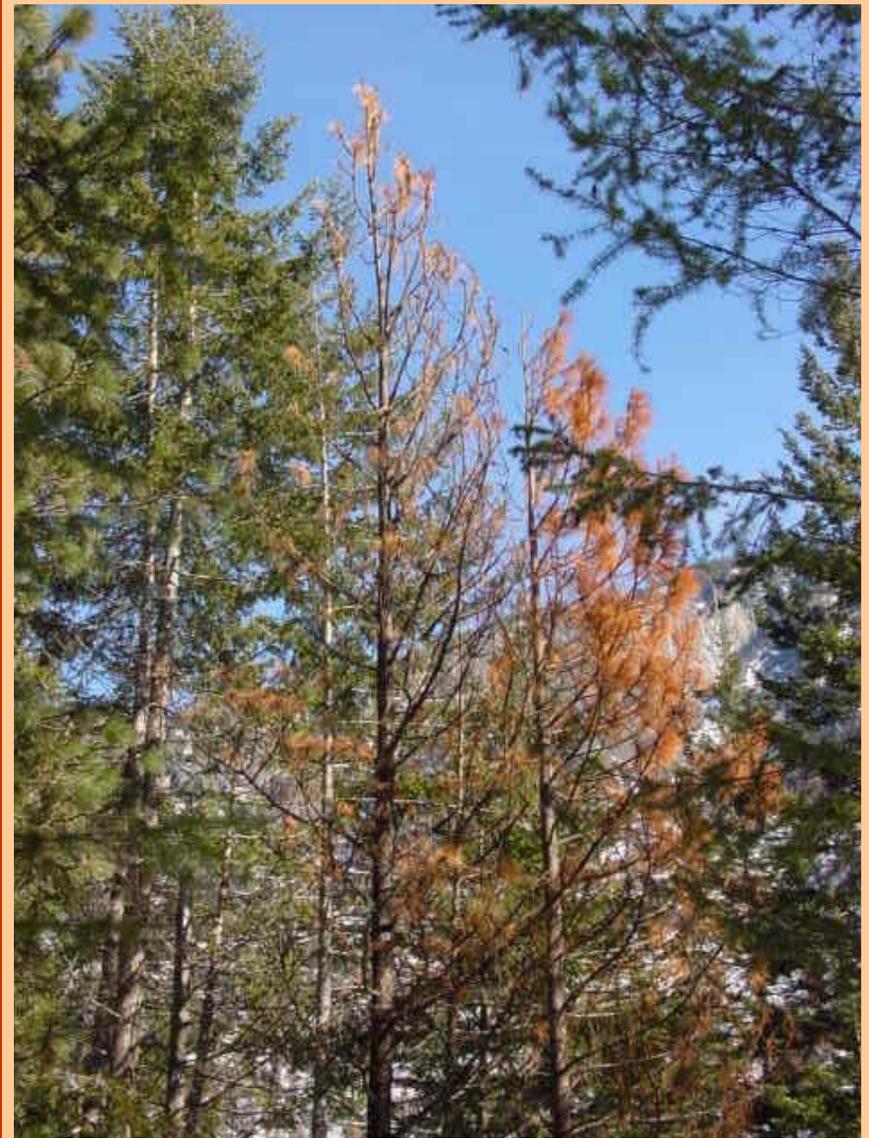


Ponderosa Pine



→ Declining Vigor →

Bark Beetles - Ponderosa Pine



Fire Tolerance



Rx Commercial Thinning



Rx Commercial Thinning



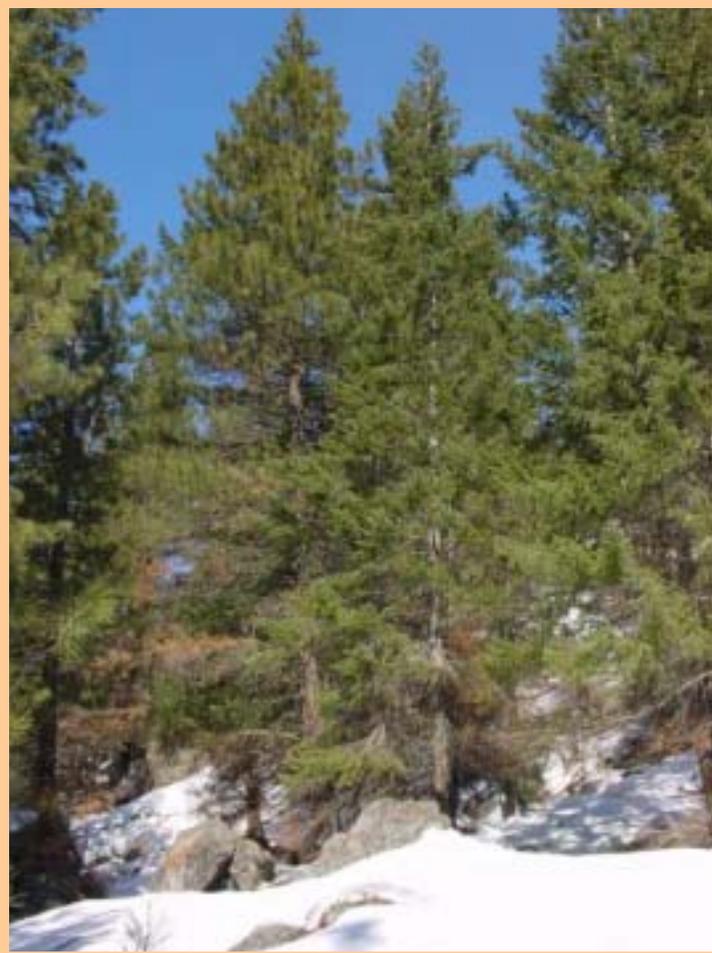
Thinning/Ladder Fuels



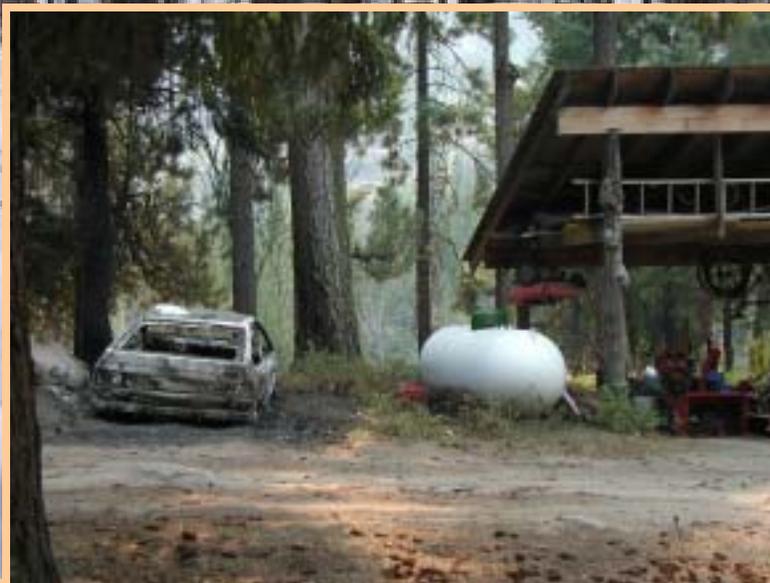
Non-Commercial Thinning



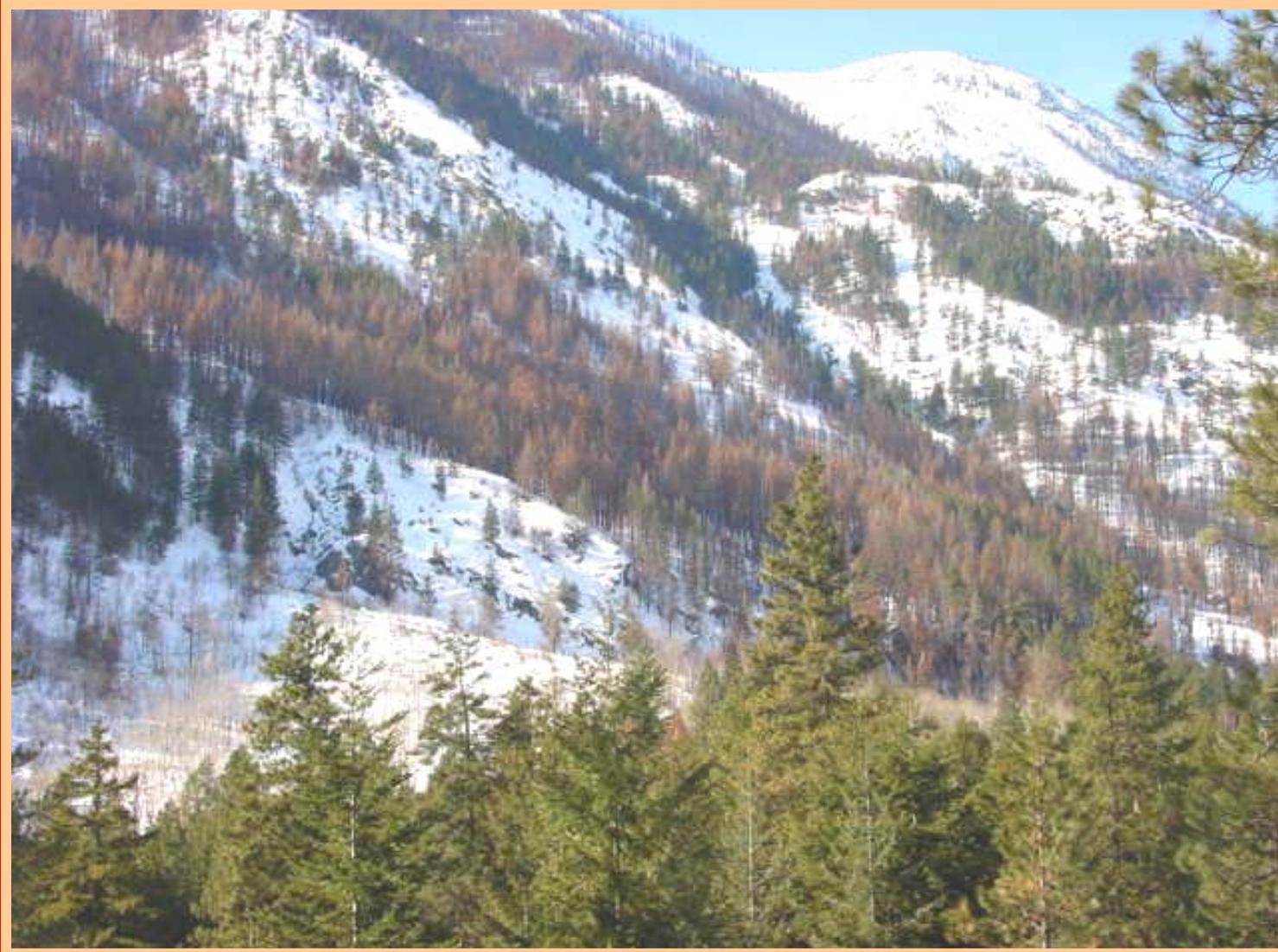
Pruning



3. Fuels Reduction



Stand Replacement Fire - LSR



Scorching vs. Crown Fire



Slash



Litter Fall



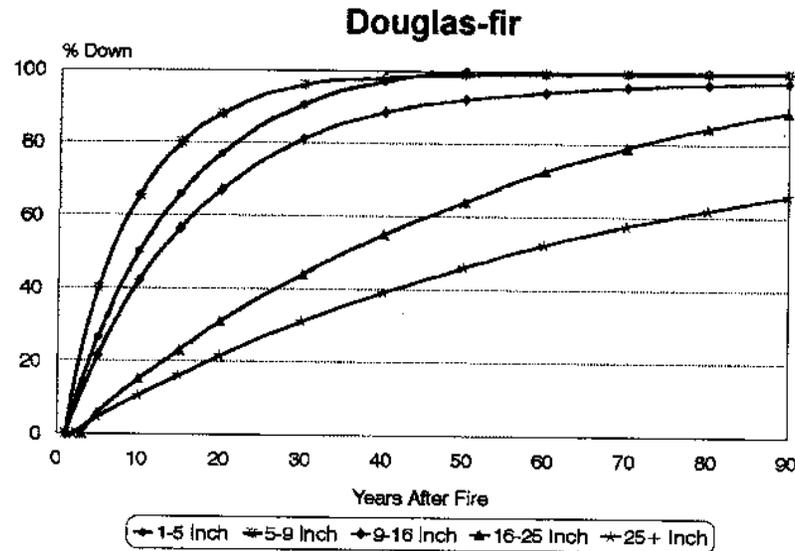


Rat Creek Fire - 1994

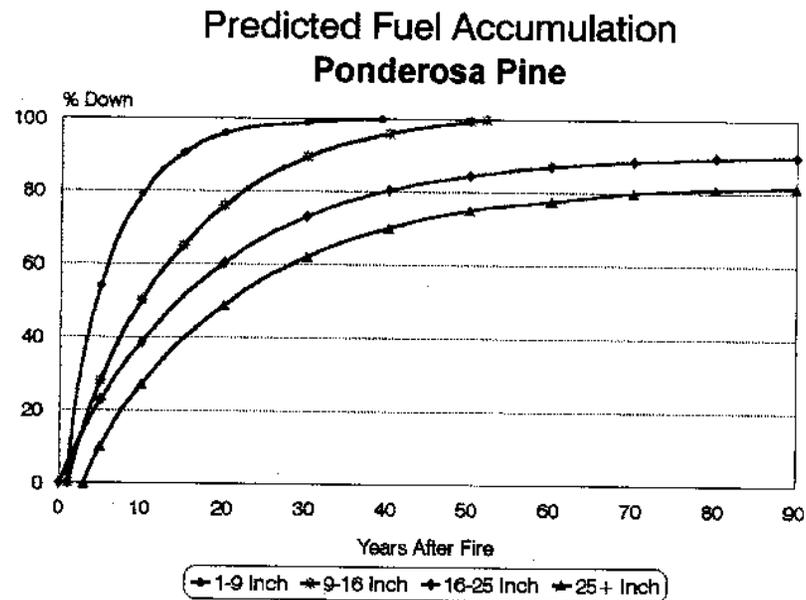


Rat Creek Fire - 1994

Predicted Fuel Accumulation



PSME R²: 1-5"=.77, 5-9"=.91, 9-16"=.92, 16-25"=.93, 25+"=.90



Fire-Tolerant Stand



Old Forest Structure





**4th of July Restoration
Proposed Action
– No Treatment Areas**

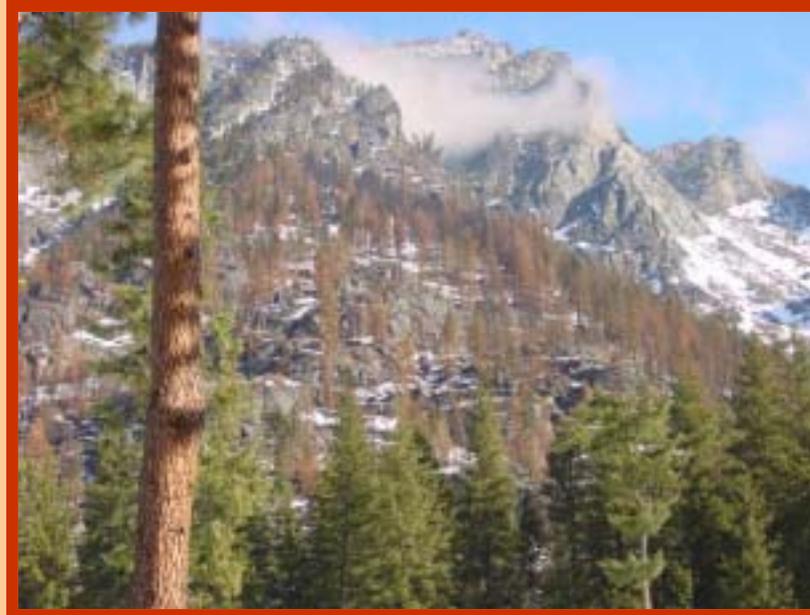
No Treatment Areas – 505 Acres

INVENTORIED ROADLESS AREA

– 5,915 Acres within fire area

- ◆ **Riparian/Wildlife Connectivity/Soil Stability – 205 Acres**
- ◆ **Burned: Unique Habitat – 30 Acres**
- ◆ **Burned: Rock Dominated Non-Forest – 80 Acres**
- ◆ **Burned: Moist Grand Fir – 55 Acres**
- ◆ **Burned: Fuels Reduction/Thinning Not Needed – 90 Acres**
- ◆ **Campgrounds – 45 Acres**

Inventoried Roadless Area - Within Fire Perimeter

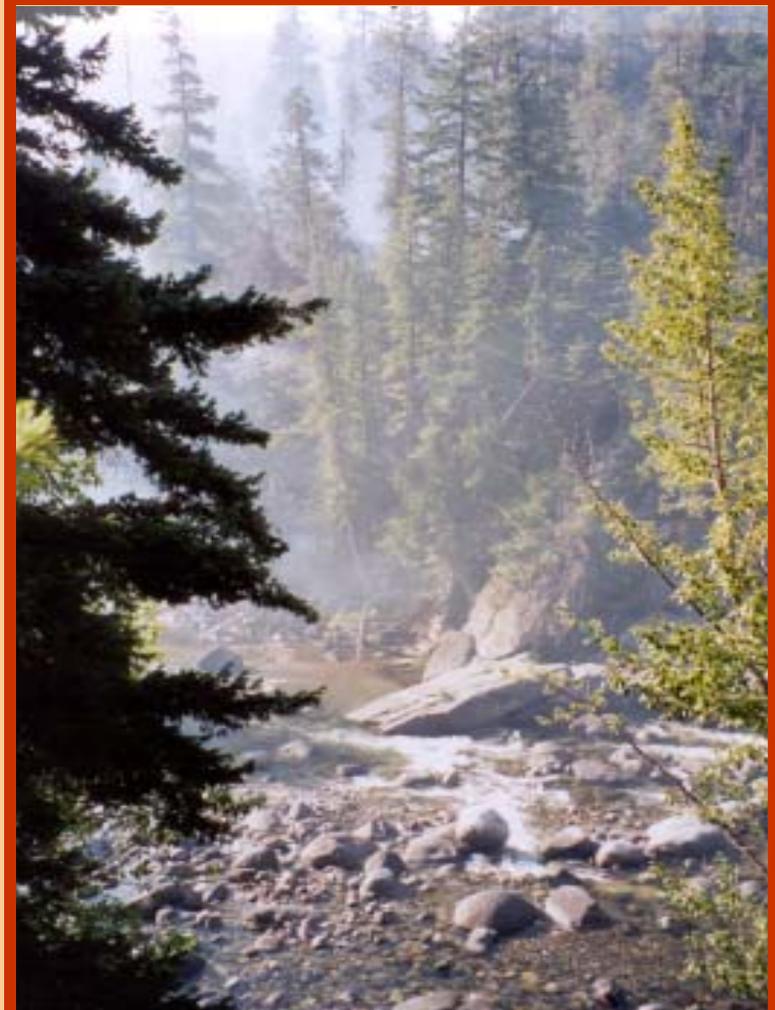


**Alpine Lakes Adjacent Roadless Area covers
from the lower valley to the ridge tops. 10%
was burned in the Icicle Complex.**

Riparian/Wildlife Connectivity/Soil Stability



Icicle Creek Riparian Corridor



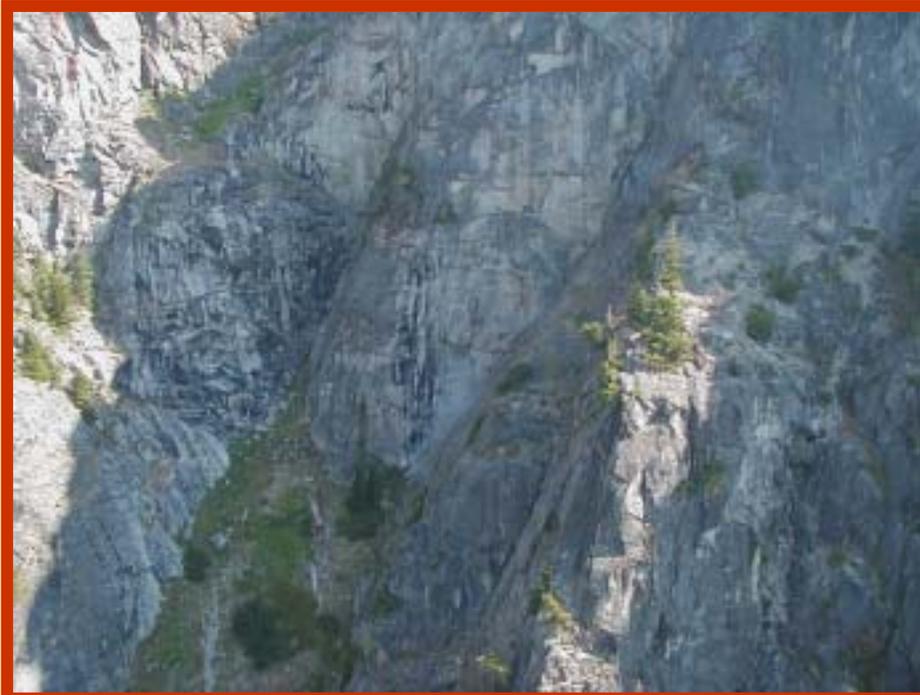
Riparian Soil Stability

Burned: Unique Habitat



A 30-acre aspen stand was burned and will regenerate naturally.

Burned: Rock Dominated Non-Forest



Extensive rocky slopes with
little vegetation carried
scattered fire.



Burned: Moist Grand Fir

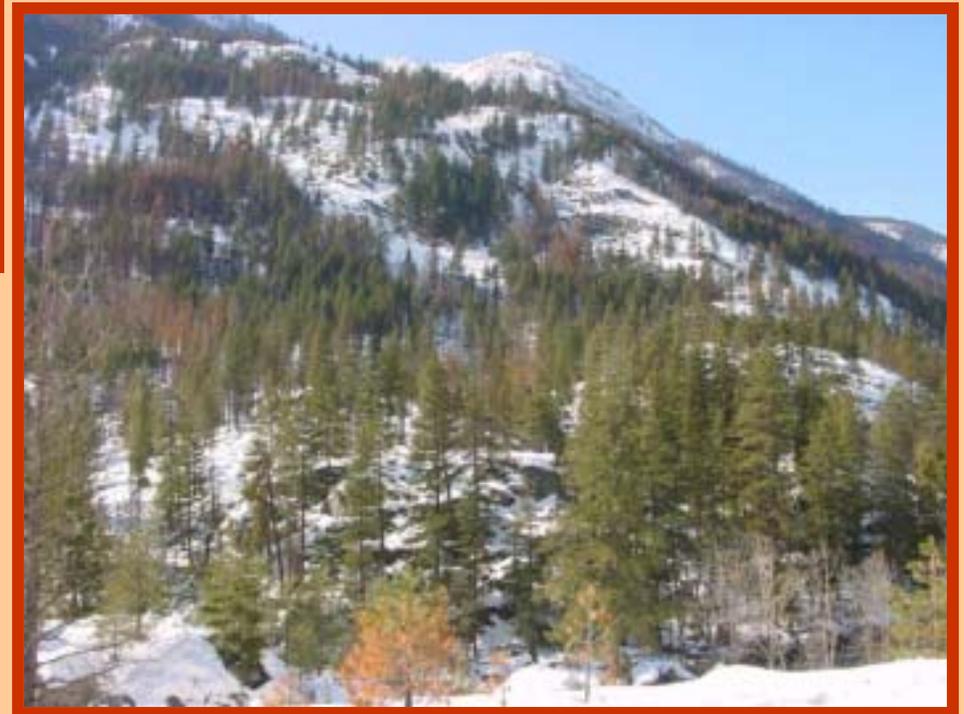
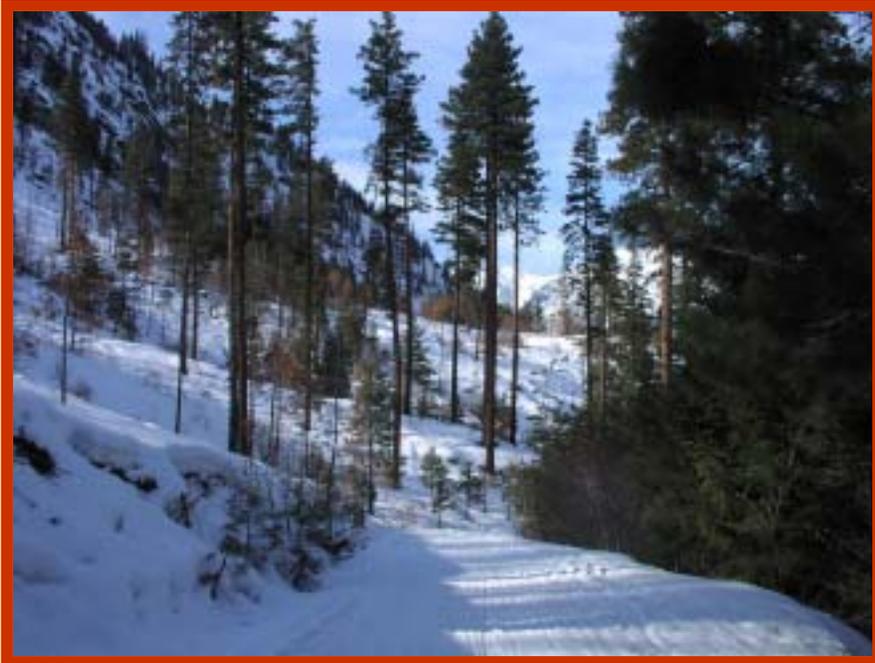


**Moist Grand Fir series -
mosaic burn on the
landscape, within natural
range of fire intensity.**



**High intensity burn in
wetter forest series of
Icicle LSR**

Burned: Fuels Reduction/ Thinning Not Needed



**Previous fuel
reduction/thinning has
occurred in the Icicle.**

CG - Campgrounds



**Unburned areas within 8-Mile CG, Bridge Cr CG
and Mt. Cashmere Group Site**

A photograph of a forest fire with thick smoke rising into the sky, overlaid with text. The image shows a dense forest of evergreen trees, with a large fire burning in the center, sending a massive plume of white and grey smoke into the air. The foreground is slightly out of focus, showing some bare branches and a grassy area. The text is centered over the image in a bold, black, sans-serif font.

**4th of July Fire
Restoration Project
NEPA Process**

National Environmental Policy Act (NEPA)

- ◆ Purpose and Need
- ◆ Proposed Action
- ◆ Issues
- ◆ Alternatives
- ◆ Environmental Effects
- ◆ EA with cover letter identifying the Preferred Alternative
- ◆ 30 Day Comment Period
- ◆ Decision Notice